

REMARKS

The Examiner believes that Applicant's amendments to correct *obvious* errors in the Specification introduce new matter. Applicant does not disagree. A person of ordinary skill in the art of hook fastener components would immediately understand that in the four particular instances identified by the Applicant, the intended units were mils (thousandths of an inch), and not millimeters. The suggested alternative reading would suggest hook fastener elements of a size far greater than those of most modern touch fastener applications. Also, note that the dimensions in the table describing a preferred embodiment support, and are completely consistent with, Applicant's amendments. For example, dimension A is 0.025 inch, which is often written as 25 mil. Applicant respectfully submits that these are simply *obvious* errors. Nevertheless, in order to advance prosecution, Applicant is deleting the four paragraphs. As such, Applicant respectfully requests withdrawal of the rejection.

The Examiner has rejected claims 35-38 and 40-42 because "it is unclear whether the bulk aspect ratio claimed by the Applicant must [a] have a value of more than 0.020 inches since the Applicant alleges that the dimensions included in the specifications are not correct and that the values should be in mils and not millimeters." Applicant *never* suggested that the dimensions in the Specification or in claim 35 were incorrect, but only that there were four *obvious* errors in Specification that needed to be addressed. With the deletion of the four paragraphs discussed above, the obvious errors have been removed. Furthermore, Applicant never stated that any other unit or dimension in the Specification was incorrect. Applicant asserts that, in fact, every other unit in the Specification, including the pending claims and the table, is correct. Applicant respectfully requests withdrawal of this rejection.

Claims 1-5, 8-16, 21-27, 30, 31, 34, 46-50, 52, 56 and 57 have been rejected as being obvious over Ausen, U.S. Patent Application Publication No. 2004/0068848 ("Ausen"). Of the rejected claims, claims 1, 24 and 46 are in independent form. Applicant respectfully requests reconsideration in light of the following remarks.

Applicant's touch fastener components have particularly good peel resistance and other performance characteristics, especially when mated with loop materials having open structures, such as those loop materials having a relatively low pile height to filament diameter ratio. In

particular, the large proportion of the fastener heads and crooks, with respect to the overall size of the hooks, can enable closures that provide performance characteristics more typical of woven hook products, but at a much lower overall profile. Often, a lower profile closure is advantageous because such a closure is less cumbersome with respect to the article to which it is attached, and less likely to interfere with the aesthetic appearance of the article. Thus, maximizing head height to overall fastener height (J/A), and maximizing crook height to entrance height (C/E) enables strong, short fastener elements that are capable of capturing and strongly retaining loops from loop materials, such as those loop materials having open structures. Maximizing fastener bulk aspect, i.e., fastener footprint to overall fastener height (LK/A), provides relatively strong, short fastener elements.

Claim 1 requires, in pertinent part, that each touch fastener element have a head having an overall height that is greater than 55 percent of an overall height of the fastener element ($J/A > 0.55$), and a ratio of an overall height of the crook to an entrance height that is greater than 0.6 ($C/E > 0.6$).

Claim 24 requires, in pertinent part, that each touch fastener element have *two heads*, at least one of which having an overall height that is greater than half of an overall height of the fastener element ($J/A > 0.50$), and a ratio of an overall height of each crook to an entrance height that is greater than 0.6 ($C/E > 0.6$).

Claim 46 requires, in pertinent part, that each touch fastener element have a ratio of an overall height of the crook to an entrance height that is greater than 0.6 ($C/E > 0.6$).

Ausen describes what are commonly referred to as "cut-and-stretch" fasteners. In particular, Ausen describes a method (Fig. 1) of making discrete, spaced apart hooks by profile extruding hook-shaped rails (Fig. 2); cutting the hook-shaped rails (Fig. 3) to create discrete hooks; and then stretching the cut rails to increase separation between the discrete hooks (Fig. 4).

Ausen does not teach or suggest the claimed touch fastener elements. In particular, Ausen does not teach or suggest touch fastener elements each having a head having an overall height that is greater than 55 percent of an overall height of the fastener element ($J/A > 0.55$), *and* a ratio of an overall height of the crook to an entrance height that is greater than 0.6 ($C/E > 0.6$), as claim 1 requires; nor does he teach or suggest touch fastener elements having two heads, at least one of which having an overall height that is greater than half of an overall height of the

fastener element ($J/A > 0.5$), *and* a ratio of an overall height of each crook to an entrance height that is greater than 0.6 ($C/E > 0.6$), as claim 24 requires. In addition, Ausen does not teach nor suggest touch fastener elements having a ratio of an overall height of the crook to an entrance height that is greater than 0.6 ($C/E > 0.6$), as claim 46 requires. Ausen simply does not recognize that such ratios or combinations of ratios are important, nor that relatively strong, short fasteners are particularly useful for capturing and strongly retaining loops of certain forms of loop materials, such as those having open structures, and thus could not have led a person of ordinary skill to Applicant's claimed fastener components.

The Examiner concedes that Ausen fails to disclose a C/E ratio that is greater than 0.6 (page 4 of the Office Action), but believes that it would have been obvious at the time of the invention since a change in the *size* of a prior art device is a design consideration. The Examiner further argues that changing the dimensions of touch fastener elements was well known at the time of invention, and depends upon the use of the touch fasteners (page 5 of the Office Action). Applicant respectfully notes that the Applicant's claims are not about size, but about *ratios* of dimensions; and while it may be true that changing a *size* of a device is within ordinary skill, it is not true that understanding how dimensions synergistically interact with one another to give unique fastener components is within ordinary skill. In Ex Parte Buchanan (Appeal No. 2000-0522, 2000 WL 33301735 B.P.A.I. 2000), the Examiner rejected claims to a package convertible into a serving bowl, which recited sides of no less than twice the width of the bottom of the package. There, the claimed relationship between two recited variables was not found in the prior art, but the examiner rejected the claims under §103, citing In re Rose and concluding that a mere change in the height of the walls would have been obvious. The Board reversed the rejection, finding that "the modification suggested by the Examiner to meet the claimed ratio would involve modification of one dimension relative to another," namely, the walls to the bottom, and that the Examiner could not supply the missing characteristic by characterizing it as mere design choice. The Board also noted that the relationship or ratio between the recited two variables was not arbitrary; rather, as is the case here, was discovered to solve a stated problem.

The Examiner states at page 5 of the Office Action that

providing a ratio greater than 0.6 is highly advantageous for those applications where heavy loads are held by the touch fastener and a stronger hold is required between the touch fasteners because the higher crook height will prevent accidental disengagement from the retaining loops.

Applicant does not find the above teaching in any of the cited references, nor finds any indication that this particular ratio of dimensions was realized to be of any given functional advantage prior to this invention. Applicant respectfully reminds the Examiner that it is inappropriate to be tainted by the Applicant's own disclosure so that Applicant's own teachings are used to reject claims.

As there is nothing in Ausen that would motivate or lead one of ordinary skill in the art to the claimed fastener components, Applicant respectfully submits that claims 1, 24 and 46, and all claims that depend therefrom are non-obvious over Ausen, and respectfully requests withdrawal of the rejection.

Claims 35-38 and 40-42 have been rejected as being obvious over Ausen in view of Martin, U.S. Patent Application Publication No. 2002/0116799 ("Martin"). Of the rejected claims, claim 35 is the only claim in independent form, the remaining claims each depending from claim 35. Applicant respectfully requests reconsideration of the rejection for the following reasons.

Claim 35 requires, in pertinent part, that each touch fastener element have a head having a bulk aspect, defined as a ratio of the product of an overall length of the fastener element and fastener element thickness to an overall height of the fastener element, that is more than 0.020 inch ($LK/A > 0.020$ inch).

The Examiner concedes that Ausen fails to disclose a bulk aspect that is more than 0.020 inch, but apparently believes that Martin supplies what is lacking in Ausen. Applicant respectfully submits that the Examiner is comparing apples to oranges in that the "bulk aspect" feature of the present disclosure and the "aspect ratio" of Martin are *completely different and unrelated parameters*. To calculate Martin's aspect ratio, one sums up all the hook head areas and divides by the surface area of the base from which the hooks extend. Note that Martin

describes his “aspect ratio” in terms of *percentage coverage* (see, e.g., claims 1, 2, and 3 of Martin). This is in contrast to Applicant’s “bulk aspect”, which is a *product* an overall length of the fastener element (L) and fastener element thickness (K), divided by an overall height of the fastener element (A). Thus, Applicant’s “bulk aspect” is a characteristic of a single fastener element, while Martin’s “aspect ratio” is a characteristic of an entire field of fastener elements.

The Examiner notes that in paragraph [81] Martin describes that hook head area is the product of perpendicular dimensions “W” and “L”, and that an individual hook having a large head area is more “skin friendly” than one with a small head area. Thus, Martin’s fastener components are “skin-friendly” because the fastener elements are densely packed with little spacing between the elements and/or have elements that have a relatively large head area. Applicants respectfully submit that this disclosure in Martin has nothing to do with the *ratio* of the product of an overall length of the fastener element and fastener element thickness to an overall height of the fastener element (LK/A).

Since there is absolutely no recognition in either Ausen or Martin that LK/A ratios are important for enabling strong, short fasteners that are capable of capturing and strongly retaining loops of loop materials, the combination of Ausen and Martin cannot render obvious claim 35, or any of the claims that depend therefrom.

Applicant believes that all presently presented claims are allowable, and respectfully requests a Notice of Allowance.


Enclosed is a check for \$120.00 for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket No. 05918-339001.

Applicant : Mark A. Clarner
Serial No. : 10/688,031
Filed : October 15, 2003
Page : 8 of 8

Attorney Docket No.: 05918-339001 / VGCP No. 6010

Respectfully submitted,

Date: May 15, 2005



James W. Babineau
Reg. No. 42,276

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

21330966.doc